REMARKS

Claims 1-7 and 15-20 are pending in the application. By this Amendment, new claims 19-20 are added.

Claim 17 is rejected under 35 U.S.C. § 102(b) as being anticipated by Potsch *et al.* (U.S. Patent No. 3,788,180; hereinafter "Potsch"). Claims 1, 2, 15, and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Potsch in view of Falk *et al.* (U.S. Patent No. 3,292,478; hereinafter "Falk"). Claims 3 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Potsch in view of Falk and further in view of DeTorre (U.S. Patent No. 5,423,240; hereinafter "DeTorre"). Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Potsch in view of Falk and further in view of Munier *et al.* (U.S. Patent No. 5,365,821; hereinafter "Munier"). Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Potsch in view of Falk and Munier and in further view of Paavola (U.S. Patent No. 4,972,750; hereinafter "Paavola"). Claims 6 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Potsch in view of Takagi (U.S. Patent No. 6,033,057; hereinafter "Takagi"). Applicant submits the arguments below in traversal of the claim rejections.

Rejection of Claim 17 under § 102(b) by Potsch

Applicant respectfully submits that claim 17 is patentable because each and every element of the claim is not disclosed by Potsch. Claim 17 recites:

> A slitter blade assembly for cutting off a workpiece, comprising:
> a drum-shaped rotary blade; and
> a disk-shaped rotary blade;
> said disk-shaped rotary blade having a cutting edge, a first beveled surface facing said drum-shaped rotary blade and progressively spaced from said drum-shaped rotary blade toward said cutting edge, and a second beveled surface facing the

> workpiece and progressively spaced from said cutting edge away from the workpiece, wherein the drum-shaped rotary blade is disposed on a drum shaft, the disk-shaped rotary blade is disposed on a disk shaft, and *the slitter blade assembly further comprising a means for rotating the drum shaft in unison with the disk shaft.*

For example, Potsch fails to disclose or even suggest the means for rotating the drum shaft in unison with the disk shaft. In the Office Action, the Examiner states that Fig. 3 and Fig. 7 supposedly show above features of the claim. Figures 2 and 3 and the corresponding sections of the specification show that the anvils 53 are mounted on a common drive shaft 54. *See* col. 4, lines 31-34. The drawings and the specification also show that knives are individually mounted on a knife support shaft or bar 61 and that the knife support bar 61 is *fixedly* secured at opposite ends to the side plates 13 and 14. *See* col. 4, lines 38-42. Although a pulley 56 is mounted on the drive shaft of the anvils 53, there is nothing to suggest that the pulley 56 also rotates the individual knife support bar 61 so that the drive shaft and the knife support bar 61 rotates in unison.

Therefore, for at least the above reasons, claim 17 is patentable.

New claims 19 and 20, which depend from claim 17, are patentable for at least the reasons submitted for claim 17.

Rejection of Claims 1, 2, 15, and 16 under § 103(a) over Potsch in view of Falk

Claim 1 is patentable because Potsch in view of Falk fail teach, suggest or provide motivation for the slitter blade assembly as recited in claim 1. Claim 1 recites:

> A slitter blade assembly for cutting off a workpiece, comprising:
> a drum-shaped rotary blade; and
> a disk-shaped rotary blade;

> said disk-shaped rotary blade having a cutting edge, a first beveled surface facing said drum-shaped rotary blade and progressively spaced from said drum-shaped rotary blade toward said cutting edge, and a second beveled surface facing the workpiece and progressively spaced from said cutting edge away from the workpiece, wherein *a first distance (CL) of said first beveled surface up from said cutting edge along a severance plane perpendicular to a surface of the workpiece is set to a value which ranges from 40μm to 200μm* and a first angle (6) of said first beveled surface from said severance plane is set to a value which ranges from 0.8 to 14.

As the Examiner concedes, neither Potsch nor Falk discloses having the claimed first distance which ranges from 40μm to 200μm. The Examiner, however, argues that it would have been obvious to reduce the size of the blade from 0.63mm to 0.2mm to allow for a thinner work piece to be cut.

Applicant respectfully disagrees because a *prima facie* case of obviousness has not been established. In Falk, the cutting die knife having the preferred dimensions is disclosed as being useful for cutting materials such as paper. *See* col. 2, lines 43-46. Therefore, the Examiner's purported motivation for reducing the size of the cutting edges to cut thinner work pieces is implausible given that the cutting die knife is already disclosed as cutting thin media such as paper. As a result, one skilled in the art would not drastically reduce the size of the cutting edges for the motivation supplied by the Examiner.

In addition, one skilled in the art would not reduce the size of the heights B and C of the cutting edge surfaces 15 and 16 in Falk because such a reduction in size would be inconsistent with the disclosed relative disposition of the cutting edge surfaces 15 and 16. Falk discloses that the cutting edge surfaces 15 and 16 are inclined by angles "u" and "r" with respect to the vertical and that the sum of angles u and r is between 50-60°. *See* col. 1, lines 61-63. In contrast, the modification of the knife taught by Falk by substantially shortening the heights B and C would

substantially flatten the cutting edge surfaces 15 and 16 so that the sum of the angles u and r would markedly increase far beyond the preferred range of 50-60°.

Further, Falk explicitly teaches having symmetrical cutting edge surfaces 15 and 16 whose respective heights B and C and respective angles of inclination u and r are approximately equal. *See* col. 1, lines 60-66. Such teachings necessarily teach away from having the asymmetric surfaces 68' and 200, as labeled by the Examiner, in knife 68 of Fig. 9 in Potsch.

Therefore, for at least the above reasons, claim 1 is patentable.

Claims 2, 15 and 16 are patentable for at least the reasons submitted for claim 1.

In addition, claim 2 is patentable because the combination of Potsch and Falk fails to teach, suggest or provide motivation for a second beveled surface from said severance plane set to a value which ranges from 65° to 85°. Rather, Falk teaches that the *sum* of the angles u and v is between 50-60° and that each of the angles u and v are preferably at least 25-30°. *See* col. 1, lines 60-62.

Claim 16 is patentable because Potsch and Falk fail to teach, suggest or provide motivation for a means for rotating the drum-shaped rotary blade in unison with the disk-shaped rotary blade.

Rejection of Claims 3 and 7 under § 103(a) over Potsch in view of Falk and further in view of DeTorre

Claims 3 and 7, which depend from or ultimately depend from claim 1, are patentable for at least the reasons submitted for claim 1 and because DeTorre fails to make up for the deficiencies of Potsch and Falk.

Rejection of Claim 4 under § 103(a) over Potsch in view of Falk and further in view of Munier

Applicant submits that claim 4, which ultimately depends from claim 1, is patentable for at least the reasons submitted for claim 1 and because Munier fails to make up for the deficiencies of Potsch and Falk.

Rejection of Claim 5 under § 103(a) over Potsch in view of Falk and Munier and in further view of Paavola

Applicant submits that claim 5, which ultimately depends from claim 1, is patentable for at least the reasons submitted for claim 1 and because Munier and Paavola fail to make up for the deficiencies of Potsch and Falk.

Rejection of Claims 6 and 18 under § 103(a) over Potsch in view of Takagi

Applicant submits that claim 6 is patentable because a *prima facie* case of obviousness was not established. In the Office Action the Examiner concedes that Potsch fails to disclose the claimed irregularities, but alleges that Takagi discloses the irregularities. Takagi, however, discloses a toner transfer roller. Although a blade 118 is disclosed, the blade does not perform any sort of cutting function, but instead, regulates the amount of toner that is applied to a roller. *See* Fig. 1. This is entirely different from Potsch which relates to an apparatus for slitting sheets of material. Therefore, one skilled in the art would not combine the teachings of Potsch and Takagi because these references are nonanalogous art.

Assuming *arguendo*, that Takagi is analogous art, the cutting edge of the disk-shaped rotary blade having irregularities along a circumference of the disk-shaped rotary blade, said irregularities having an irregularity quantity (G) set to a value which ranges from 0.5 μm to 5 μm, is one of the inventive aspects. Applicant respectfully requests the Examiner to provide

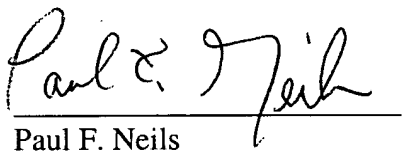
prior art to support the Official Notice alleging that such claimed features are well known in the art.

New claims 19 and 20 are added, are readable on the elected invention, and are fully supported in the original disclosure. Further, the new claims 19 and 20, which depend from claim 17, are patentable for at least the reasons submitted for claim 17.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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